CLAIMS

1. An substantially pure polypeptide selected from the group consisting of:
   (a) a polypeptide comprising the amino acid sequence of SEQ ID NO: 2, 4, 6, 8, 10, and 12;
   (b) a polypeptide that comprises the amino acid sequence of SEQ ID NO: 2, 4, 6, 8, 10, and 12 in which one or more amino acids are substituted, deleted, inserted, and/or added and that has a biological activity equivalent to a protein consisting of the amino acid sequence of SEQ ID NO: 2, 4, 6, 8, 10, and 12; and
   (c) a polypeptide encoded by a polynucleotide that hybridizes under stringent conditions to a polynucleotide consisting of the nucleotide sequence of SEQ ID NO: 1, 3, 5, 7, 9, and 11, wherein the polypeptide has a biological activity equivalent to a polypeptide consisting of the amino acid sequence of any one of SEQ ID NO: 2, 4, 6, 8, 10, and 12

2. An isolated polynucleotide encoding the polypeptide of claim 1.

3. A vector comprising the polynucleotide of claim 2.

4. A host cell harboring the polynucleotide of claim 2 or the vector of claim 3.

5. A method for producing the polypeptide of claim 1, said method comprising the steps of:
   (a) culturing the host cell of claim 4;
   (b) allowing the host cell to express the polypeptide; and
   (c) collecting the expressed polypeptide.

6. An antibody binding to the polypeptide of claim 1.

7. A polynucleotide that is complementary to the polynucleotide of claim 2 or to the complementary strand thereof and that comprises at least 15 nucleotides.

8. An antisense polynucleotide or small interfering RNA against the polynucleotide of claim 2.

9. The antisense polynucleotide for the polynucleotide comprising the nucleotide sequence of SEQ ID NO :1 of claim 8, wherein the antisense polynucleotide comprises nucleotide sequence of SEQ ID NO: 50.

10. The antisense polynucleotide for the polynucleotide comprising the nucleotide sequence

of SEQ ID NO :3 of claim 8, wherein the antisense polynucleotide comprises nucleotide sequence of SEQ ID NO: 54 or 56.

11. The antisense polynucleotide for the polynucleotide comprising the nucleotide sequence of SEQ ID NO :5 of claim 8, wherein the antisense polynucleotide comprises nucleotide sequence of SEQ ID NO: 68.

12. The antisense polynucleotide for the polynucleotide comprising the nucleotide sequence of SEQ ID NO :7 or 9 of claim 8, wherein the antisense polynucleotide comprises nucleotide sequence group consisting of SEQ ID NO: 58, 60, 62, 64, or 66.

13. The antisense polynucleotide for the polynucleotide comprising the nucleotide sequence of SEQ ID NO :11 of claim 8, wherein the antisense polynucleotide comprises nucleotide sequence of SEQ ID NO: 52.

14. The small interfering RNA for the polynucleotide comprising the nucleotide sequence of SEQ ID NO :11 of claim 8, wherein the target sequence comprises the nucleotide sequence of SEQ ID NO: 126.

15. The small interfering RNA for the polynucleotide comprising the nucleotide sequence of SEQ ID NO :3 of claim 8, wherein the target sequence thereof comprises the nucleotide sequence of SEQ ID NO: 127.

16. The small interfering RNA for the polynucleotide comprising the nucleotide sequence of SEQ ID NO :5 of claim 8, wherein the target sequence thereof comprises the nucleotide sequence of SEQ ID NO: 128 or 129.

17. A method of diagnosing colon cancer or a predisposition to developing colon cancer in a subject, comprising determining an expression level of a colon cancer-associated gene selected from the group consisting of CGX 1-7 in a patient derived biological sample, wherein an increase of said level compared to a normal control level of said gene indicates that said subject suffers from or is at risk of developing colon cancer.

18. The method of claim 17, wherein said increase is at least 10% greater than said normal control level.

19. The method of claim 17, wherein said method further comprises determining said expression level of a plurality of colon cancer-associated genes.

20. The method of claim 17, wherein the expression level is determined by any one method select from group consisting of:
(a) detecting the mRNA of the colon cancer -associated genes,
(b) detecting the protein encoded by the colon cancer -associated genes, and
(c) detecting the biological activity of the protein encoded by the colon cancer -associated genes,

21. The method of claim 17, wherein said expression level is determined by detecting hybridization of a colon cancer-associated gene probe to a gene transcript of said patient-derived biological sample.

22. The method of claim 21, wherein said hybridization step is carried out on a DNA array.

23. The method of claim 17, wherein said biological sample comprises an mucosal cell.

24. The method of claim 17, wherein said biological sample comprises a tumor cell.

25. The method of claim 17, wherein said biological sample comprises a colon cancer cell.

26. A colon cancer reference expression profile, comprising a pattern of gene expression of two or more genes selected from the group consisting of CGX 1-7.

27. A method of screening for a compound for treating or preventing colon cancer, said method comprising the steps of:
a) contacting a test compound with a polypeptide encoded by a nucleic acid selected from the group consisting of CGX 1-7;
b) detecting the binding activity between the polypeptide and the test compound; and
c) selecting a compound that binds to the polypeptide.

28. A method of screening for a compound for treating or preventing colon cancer , said method comprising the steps of:
a) contacting a candidate compound with a cell expressing one or more marker genes, wherein the one or more marker genes is selected from the group consisting of CGX 1-7; and
b) selecting a compound that reduces the expression level of one or more marker genes selected from the group consisting of CGX 1-7.

29. The method of claim 28, wherein said test cell comprises a colon cancer cell.

30. A method of screening for a compound for treating or preventing colon cancer, said method comprising the steps of:

a) contacting a test compound with a polypeptide encoded by a nucleic acid selected from the group consisting of CGX 1-7;

b) detecting the biological activity of the polypeptide of step (a); and

c) selecting a compound that suppresses the biological activity of the polypeptide encoded by a nucleic acid selected from the group consisting of CGX 1-7 in comparison with the biological activity detected in the absence of the test compound.

31. A method of screening for compound for treating or preventing colon cancer, said method comprising the steps of:

a) contacting a candidate compound with a cell into which a vector comprising the transcriptional regulatory region of one or more marker genes and a reporter gene that is expressed under the control of the transcriptional regulatory region has been introduced, wherein the one or more marker genes are selected from the group consisting of CGX 1-7

b) measuring the activity of said reporter gene; and

c) selecting a compound that reduces the expression level of said reporter gene as compared to a control.

32. A method of screening for a compound for treating or preventing colon cancer, said method comprising the steps of:

(a) contacting a polypeptide encoded by ARHCL1 with Zyxin in the existence of a test compound;

(b) detecting the binding between the polypeptide and Zyxin; and

(c) selecting the test compound that inhibits the binding between the polypeptide and Zyxin.

33. A method of screening for a compound for treating or preventing colon cancer, said method comprising the steps of:

(a) contacting a polypeptide encoded by NFXL1 with MGC10334 or CENPC1 in the existence of a test compound;

(b) detecting the binding between the polypeptide and MGC10334 or CENPC1; and

(c) selecting the test compound that inhibits the binding between the polypeptide and

MGC10334 or CENPC1.

34. A method of screening for a compound for treating or preventing colon cancer, said method comprising the steps of:

(a) contacting a polypeptide encoded by C20orf20 with BRD8 in the existence of a test compound;

(b) detecting the binding between the polypeptide and BRD8 ; and

(c) selecting the test compound that inhibits the binding between the polypeptide and BRD8 .

35. A method of screening for a compound for treating or preventing colon cancer, said method comprising the steps of:

(a) contacting a polypeptide encoded by CCPUCC1 with nCLU in the existence of a test compound;

(b) detecting the binding between the polypeptide and nCLU ; and

(c) selecting the test compound that inhibits the binding between the polypeptide and nCLU.

36. A kit comprising a detection reagent which binds to one or more nucleic acid sequences selected from the group consisting of CGX 1-7.

37. A kit comprising a detection reagent which binds to one or more polypeptide encoded by nucleic acid sequences selected from the group consisting of CGX 1-7.

38. An array comprising a nucleic acid which binds to two or more nucleic acid sequences selected from the group consisting of CGX 1-7.

39. A method for treating colon cancer, said method comprising the step of administering a pharmaceutically effective amount of an antisense polynucleotide or small interfering RNA against a polynucleotide selected from the group consisting of CGX 1-7.

40. The method of claim 39, wherein the nucleotide sequence of the antisense polynucleotide is selected from the group comprising of the nucleotide sequence of SEQ ID NOs: 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70,72, 74, 76.

41. The method of claim 39, wherein the taeget sequence of the small interfering RNA comprising the nucleotide sequence of SEQ ID NOs: 126-129.

42. A method for treating or preventing colon cancer in a subject comprising the step of administering to said subject a pharmaceutically effective amount of an antibody or fragment thereof that binds to a protein encoded by any one nucleic acid selected from the group consisting of CGX 1-7.

43. A method of treating or preventing colon cancer in a subject comprising administering to said subject a pharmaceutically effective amount of a vaccine comprising a polypeptide encoded by a nucleic acid selected from the group consisting of CGX 1-7 or an immunologically active fragment of said polypeptide, or a polynucleotide encoding the polypeptide.

44. A method for inducing an anti tumor immunity, said method comprising the step of contacting a polypeptide encoded by po ;ynucleotide selected from the group consisting of CGX 1-7 with antigen presenting cells, or introducing a polynucleotide encoding the polypeptide or a vector comprising the polynucleotide to antigen presenting cells.

45. The method for inducing an anti tumor immunity of claim 44, wherein the method further comprising the step of administering the antigen presenting cells to a subject.

46 A method for treating or preventing colon cancer in a subject, said method comprising the step of administering a pharmaceutically effective amount of a compound that is obtained by the method according to any one of claims 27-35.

47. A composition for treating or preventing colon cancer, said composition comprising a pharmaceutically effective amount of an antisense polynucleotide or small interfering RNA against a polynucleotide select from group consisting of CGX 1-7.

48. A composition for treating or preventing colon cancer, said composition comprising a pharmaceutically effective amount of an antibody or fragment thereof that binds to a protein encoded by any one nucleic acid selected from the group consisting of CGX 1-7.

49. A composition for treating or preventing colon cancer, said composition comprising a pharmaceutically effective amount of a polypeptide encoded by a nucleic acid selected from the group consisting of CGX 1-7 or an immunologically active fragment of said polypeptide, or a polynucleotide encoding the polypeptide.

50. A composition for treating or preventing colon cancer, said composition comprising a pharmaceutically effective amount of the compound selected by the method of any one of claims 27-35 as an active ingredient, and a pharmaceutically acceptable carrier.

51. A method of diagnosing gastric cancer or a predisposition to developing gastric cancer in a subject, comprising determining an expression level of a gastric cancer-associated gene CGX 8 in a patient derived biological sample, wherein an increase of said level compared to a normal control level of said gene indicates that said subject suffers from or is at risk of developing gastric cancer.

52. The method of claim 51, wherein said increase is at least 10% greater than said normal control level.

53. The method of claim 51, wherein the expression level is determined by any one method select from group consisting of:
(a) detecting the mRNA of the gastric cancer-associated gene CGX 8,
(b) detecting the protein encoded by the gastric cancer -associated gene CGX 8, and
(c) detecting the biological activity of the protein encoded by the gastric cancer -associated gene CGX 8,

54. The method of claim 51, wherein said expression level is determined by detecting hybridization of a gastric cancer-associated gene CGX 8 probe to a gene transcript of said patient-derived biological sample.

55. The method of claim 54, wherein said hybridization step is carried out on a DNA array.

56. The method of claim 51, wherein said biological sample comprises an mucosal cell.

57. The method of claim 51, wherein said biological sample comprises a tumor cell.

58. The method of claim 51, wherein said biological sample comprises a gastric cancer cell.

59. A method of screening for a compound for treating or preventing gastric cancer, said method comprising the steps of:
a) contacting a test compound with a polypeptide encoded by CGX 8;
b) detecting the binding activity between the polypeptide and the test compound; and

c) selecting a compound that binds to the polypeptide.

60. A method of screening for a compound for treating or preventing gastric cancer , said method comprising the steps of:

a) contacting a candidate compound with a cell expressing CGX 8; and

b) selecting a compound that reduces the expression level of CGX 8.

61. The method of claim 60, wherein said test cell comprises a gastric cancer cell.

62. A method of screening for a compound for treating or preventing gastric cancer, said method comprising the steps of:

a) contacting a test compound with a polypeptide encoded by CGX 8;

b) detecting the biological activity of the polypeptide of step (a); and

c) selecting a compound that suppresses the biological activity of the polypeptide encoded by CGX 8 in comparison with the biological activity detected in the absence of the test compound.

63. A method of screening for compound for treating or preventing gastric cancer, said method comprising the steps of:

a) contacting a candidate compound with a cell into which a vector comprising the transcriptional regulatory region of CGX 8 and a reporter gene that is expressed under the control of the transcriptional regulatory region has been introduced ;

b) measuring the activity of said reporter gene; and

c) selecting a compound that reduces the expression level of said reporter gene as compared to a control.

64. A kit comprising a detection reagent which binds to nucleic acid of CGX 8.

65. A kit comprising a detection reagent which binds to a polypeptide encoded by CGX 8.

66. A method for treating gastric cancer, said method comprising the step of administering a pharmaceutically effective amount of an antisense polynucleotide or small interfering RNA against a polynucleotide of CGX 8.

67. The method of claim 66, wherein the nucleotide sequence of the antisense polynucleotide is a nucleotide sequence of SEQ ID NO: 79.

68. A method for treating or preventing gastric cancer in a subject comprising the step of administering to said subject a pharmaceutically effective amount of an antibody or

fragment thereof that binds to a protein encoded by CGX 8.

69. A method of treating or preventing gastric cancer in a subject comprising administering to said subject a pharmaceutically effective amount of a vaccine comprising a polypeptide encoded by CGX 8 or an immunologically active fragment of said polypeptide, or a polynucleotide encoding the polypeptide.

70. A method for inducing an anti tumor immunity, said method comprising the step of contacting a polypeptide encoded by CGX 8 with antigen presenting cells, or introducing a polynucleotide encoding the polypeptide or a vector comprising the polynucleotide to antigen presenting cells.

71. The method for inducing an anti tumor immunity of claim 70, wherein the method further comprising the step of administering the antigen presenting cells to a subject.

72. A method for treating or preventing gastric cancer in a subject, said method comprising the step of administering a pharmaceutically effective amount of a compound that is obtained by the method according to any one of claims 55-59.

73. A composition for treating or preventing gastric cancer, said composition comprising a pharmaceutically effective amount of an antisense polynucleotide or small interfering RNA against a polynucleotide of CGX 8.

74. A composition for treating or preventing gastric cancer, said composition comprising a pharmaceutically effective amount of an antibody or fragment thereof that binds to a protein encoded by CGX 8.

75. A composition for treating or preventing gastric cancer, said composition comprising a pharmaceutically effective amount of a polypeptide encoded by CGX 8 or an immunologically active fragment of said polypeptide, or a polynucleotide encoding the polypeptide.

76. A composition for treating or preventing gastric cancer, said composition comprising a pharmaceutically effective amount of the compound selected by the method of any one of claims 59-63 as an active ingredient, and a pharmaceutically acceptable carrier.